

WHAT IS CLAIMED IS:

1. An image pickup apparatus comprising:
an image sensor for picking up a scene in
response to a control signal to thereby output an image
signal representative of said scene;
- 5 a storage for storing a plurality of frames of
image signals;
 a selecting device for allowing an operator of
said image pickup apparatus to select a desired one
of the plurality of frames of image signals stored in
10 said storage;
 outputting circuitry for reading the one frame
of image signal out of said storage and outputting said
one frame of image signal; and
 a controller operative in response to said
15 selecting device for outputting the control signal to
cause said image sensor to pick up the scene at
preselected intervals and for controlling said
storage ;
 said storage storing latest ones of a plurality
20 of frames of image signals picked up at the preselected
intervals while sequentially updating said plurality
of latest frames of image signals;
 said controller causing said storage to hold
frames of image signals picked up during a period of
25 time that is based on a release operation.

2. An apparatus in accordance with claim 1,
wherein said output circuitry comprises a recording
circuit for recording the one frame of image signal

selected in a data recording medium removably mounted
5 to said apparatus.

3. An apparatus in accordance with claim 1,
wherein said controller comprises a mode setting
circuit for allowing the operator to set a mode that
causes said storage to hold the frames of image signals
5 picked up during the period of time at least before
or after the release operation, whereby the frames of
image signals are stored in said storage in accordance
with said mode.

4. An apparatus in accordance with claim 3,
wherein when the operator sets a "Pre" mode for causing
said storage to hold the frames of image signals picked
up before the release operation, said controller
5 causes said storage to hold the frames of image signals
picked up at least before the release operation.

5. An apparatus in accordance with claim 3,
wherein when the operator sets a "Post" mode for
causing said storage to hold the frames of image
signals picked up after the release operation, said
5 controller causes said storage to hold the frames of
image signals picked up at least after the release
operation.

6. An apparatus in accordance with claim 3,
wherein when the operator sets a "Pre/Post" mode for
causing said storage to hold the frames of image
signals picked up before and after the release
5 operation, said controller causes said storage to hold
the frames of image signals picked up before and after

the release operation.

7. An apparatus in accordance with claim 1, further comprising a display for displaying pictures represented by the frames of image signals stored in said storage, wherein said controller causes a picture
5 represented by the one frame of image signal selected to be distinguished from the other pictures on said display.

8. An apparatus in accordance with claim 7, wherein said controller causes said display to display the pictures together in a preselected format.

9. An apparatus in accordance with claim 3, further comprising a switch circuit for generating first information and second information in response to a first release operation and a second release
5 operation, respectively, wherein said controller controls, in response to said first information, said image sensor and said storage for executing pickup control at the preselected intervals and storing resulting frames of image signals in said storage and
10 then causes, in response to said second information and in accordance with the mode set by the operator, said storage to hold the frames of image signals existing therein.

10. An apparatus in accordance with claim 9, wherein said switch circuit generates the first information when the operator presses a release button to a half-stroke position and then generates the second
5 information when the operator presses said release

button to a full-stroke position.

11. An apparatus in accordance with claim 9, wherein said switch circuit comprises a sensor for generating the first information when the operator holds said apparatus in a position ready to shoot the
5 scene.

12. An apparatus in accordance with claim 1, further comprising a signal generating circuit for generating timing signals at the preselected intervals under control of said controller, wherein said
5 controller executes the pickup control over said image sensor and storage control over said storage at said preselected intervals for thereby causing the frames of image signals picked up at said intervals to be written to said storage.

13. An apparatus in accordance with claim 12, wherein said controller sets a period of time corresponding to a photometric value as the preselected intervals.

14. An apparatus in accordance with claim 1, wherein said controller further executes, when executing the pickup control by controlling said image sensor, control for correcting exposure in a plurality
5 of steps, wherein said storage stores latest ones of the plurality of frames of image signals picked up at the preselected intervals and corrected in exposure in said plurality of steps, while sequentially updating said plurality of latest frames of image
10 signals, and wherein said selecting device allows the

operator to select a desired one of image data including image data corrected in exposure in said plurality of steps.

15. An apparatus in accordance with claim 1, further comprising a bilevel image data generating device for generating bilevel image data representative of a bilevel picture to be compared with pictures represented by the plurality of frames of image signals existing in said storage with respect to a correlation, wherein said controller determines a correlation between each of said pictures and said bilevel picture, and wherein said selecting device 10 allows the operator to select a frame of image data having a high degree of correlation as determined by said controller.

16. An apparatus in accordance with claim 15, wherein said controller transforms each of the frames of signals stored in said storage to bilevel image data and compares said bilevel image data and the bilevel 5 image data output from said bilevel image data generating device to thereby determine the correlation.

17. An apparatus in accordance with claim 16, wherein said controller causes the frame of image data having the high degree of correlation to be distinguished from the other frames of image data at 5 the time of display.

18. An apparatus in accordance with claim 15, wherein said controller further executes, when

executing the pickup control by controlling said image sensor, control for correcting exposure in a plurality of steps, wherein said storage stores latest ones of the plurality of frames of image signals picked up at the preselected intervals and corrected in exposure in said plurality of steps, while sequentially updating said plurality of latest frames of image signals, and wherein said selecting device allows the operator to select a desired one of image data including image data corrected in exposure in said plurality of steps.

19. An apparatus in accordance with claim 15, wherein said controller transforms the image data picked up at the preselected intervals without the exposure correction and stored in said storage to bilevel image data and compares said bilevel image data and the bilevel image data output from said bilevel image data generating device.

20. An image pickup apparatus comprising:
an image sensor for picking up a scene in response to a control signal to thereby output an image signal representative of said scene;
5 a recording device for recording a plurality of frames of image signals;
a selecting device for allowing an operator of said image pickup apparatus to select a desired one of the plurality of frames of image signals recorded in said recording device; and
10 a controller operative in response to said selecting device for outputting the control signal to causes said image sensor to pick up the scene at

15 preselected intervals and for controlling said recording device;

said recording device recording latest ones of a plurality of frames of image signals picked up at the preselected intervals while sequentially updating said plurality of latest frames of image signals;

20 said controller causing said recording device to hold frames of image signals picked up during a period of time based on a release operation, and causing non-selected frames of image signals, as distinguished from the one frame of image signal
25 selected, existing in said recording device to be deleted.

21. An apparatus in accordance with claim 20, wherein said controller comprises a mode setting circuit for allowing the operator to set a mode that causes said recording device to hold the frames of
5 image signals picked up during the period of time at least before or after the release operation, whereby the frames of image signals are recorded in said recording device in accordance with said mode.

22. An apparatus in accordance with claim 21, wherein when the operator sets a "Pre" mode for causing said recording device to hold the frames of image signals picked up before the release operation, said
5 controller causes said recording device to hold the frames of image signals picked up at least before the release operation.

23. An apparatus in accordance with claim 21, wherein when the operator sets a "Post" mode for

causing said recording device to hold the frames of image signals picked up after the release operation,
5 said controller causes said recording device to hold the frames of image signals picked up at least after the release operation.

24. An apparatus in accordance with claim 21, wherein when the operator sets a "Pre/Post" mode for causing said recording device to hold the frames of image signals picked up before and after the release
5 operation, said controller causes said recording device to hold the frames of image signals picked up before and after the release operation.

25. An apparatus in accordance with claim 20, further comprising a display for displaying pictures represented by the frames of image signals recorded in said recording device, wherein said controller
5 causes a picture represented by the one frame of image signal selected to be distinguished from the other pictures on said display.

26. An apparatus in accordance with claim 25, wherein said controller causes said display to display the pictures together in a preselected format.

27. An apparatus in accordance with claim 21, further comprising a switch circuit for generating first information and second information in response to a first release operation and a second release
5 operation, respectively, wherein said controller controls, in response to said first information, said image sensor and said recording device for executing

pickup control at the preselected intervals and recording resulting frames of image signals in said 10 recording device and then causes, in response to said second information and in accordance with the mode set by the operator, said recording device to hold the frames of image signals existing therein.

28. An apparatus in accordance with claim 27, wherein said switch circuit generates the first information when the operator presses a release button to a half-stroke position and then generates the second 5 information when the operator presses said release button to a full-stroke position.

29. An apparatus in accordance with claim 27, wherein said switch circuit comprises a sensor for generating the first information when the operator holds said apparatus in a position ready to shoot the 5 scene.

30. An apparatus in accordance with claim 20, further comprising a signal generating circuit for generating timing signals at the preselected intervals under control of said controller, wherein said 5 controller executes the pickup control over said image sensor and storage control over said recording device at said preselected intervals for thereby causing the frames of image signals picked up at said intervals to be written to said recording device.

31. An apparatus in accordance with claim 30, wherein said controller sets a period of time corresponding to a photometric value as the

preselected intervals.

32. An apparatus in accordance with claim 20, wherein said controller further executes, when executing the pickup control by controlling said image sensor, control for correcting exposure in a plurality 5 of steps, wherein said recording device records latest ones of the plurality of frames of image signals picked up at the preselected intervals and corrected in exposure in said plurality of steps while sequentially updating said latest frames of image signals, and 10 wherein said selecting device allows the operator to select a desired one of image data including image data corrected in exposure in said plurality of steps.

33. An apparatus in accordance with claim 20, further comprising a bilevel image data generating device for generating bilevel image data representative of a bilevel picture to be compared with 5 pictures represented by the plurality of frames of image signals existing in said recording device with respect to a correlation, wherein said controller determines a correlation between each of said pictures and said bilevel picture, and wherein said selecting 10 device allows the operator to select a frame of image data having a high degree of correlation as determined by said controller.

34. An apparatus in accordance with claim 33, wherein said controller transforms each of the frames of signals recorded in said recording device to bilevel image data and compares said bilevel image data and 5 the bilevel image data output from said bilevel image

data generating device to thereby determine the correlation.

35. An apparatus in accordance with claim 34, wherein said controller causes the frame of image data having the high degree of correlation to be distinguished from the other frames of image data at 5 the time of display.

36. An apparatus in accordance with claim 33, wherein said controller further executes, when executing the pickup control by controlling said image sensor, control for correcting exposure in a plurality 5 of steps, wherein said recording device records, among the plurality of frames of image signals picked up at the preselected intervals and corrected in exposure in said plurality of steps, a plurality of latest frames of image signals while sequentially updating 10 said plurality of latest frames of image signals, and wherein said selecting device allows the operator to select a desired one of image data including image data corrected in exposure in said plurality of steps.

37. An apparatus in accordance with claim 33, wherein said controller transforms the image data picked up at the preselected intervals without the exposure correction and recorded in said recording 5 device to bilevel image data and compares said bilevel image data and the bilevel image data output from said bilevel image data generating device.